

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: CORELITE

Report Number: P938453

Luminaire Tested: SQ4-FB-150U-100D-93050-1D-UNV-STD-W-12-3000K

Issue Date: 12/17/2024

**Test Information**

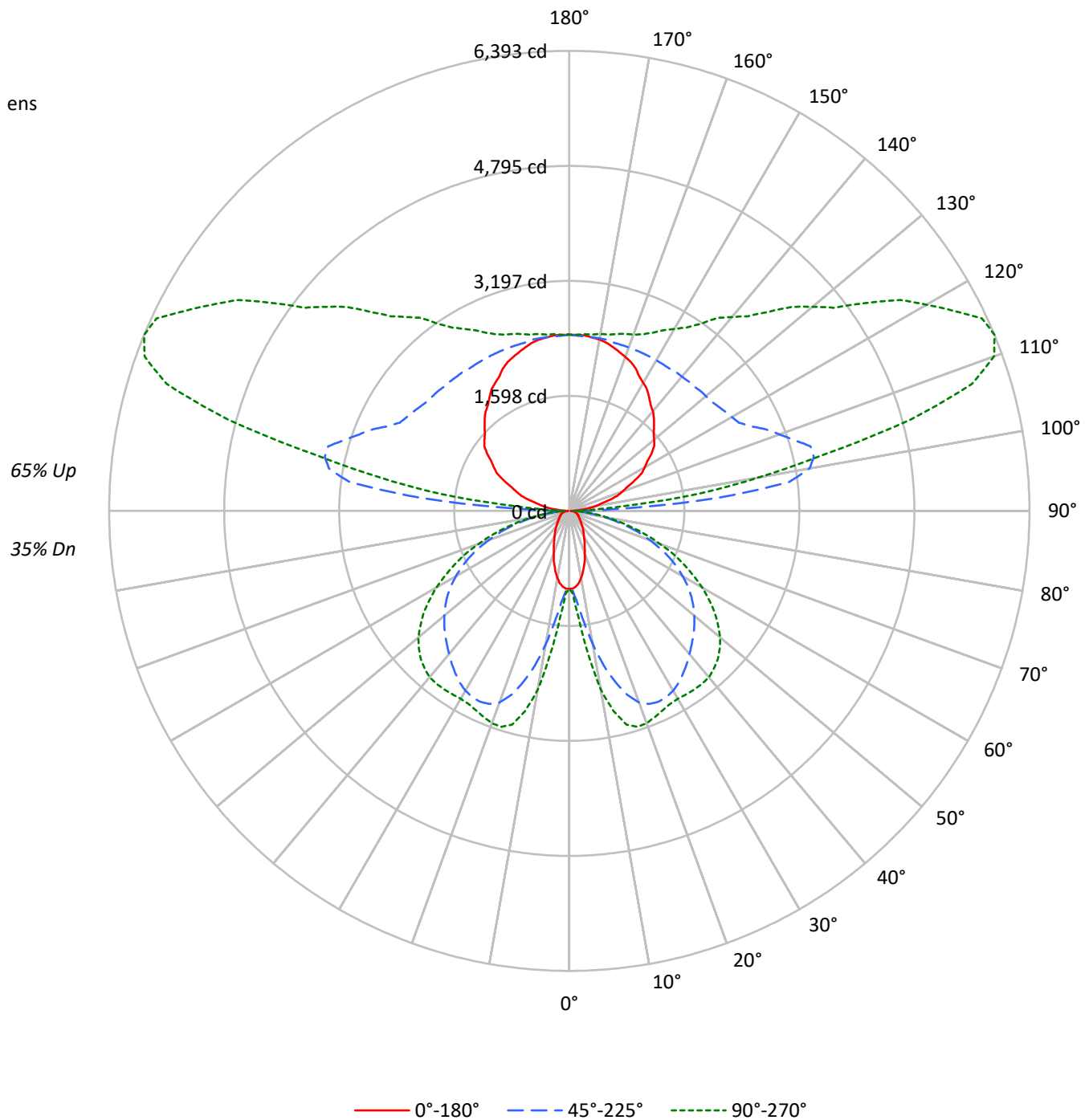
Test Method: LM-79-2019  
Report Number: P938453  
REPORT IS A COMBINATION OF REPORTS P933623 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-150U-100D-93050-1D-UNV-STD-W-12-3000K  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24258.6 lumens  
Efficiency: N/A  
Efficacy: 111.7 lumens/watt  
Spacing Criteria (0/90/45): 0.71 / 2.69 / 2.33  
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 12' x H: 0.1')  
CIE Type: Semi-Indirect  
  
Input Watts (W): 217.2  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				
RC	80				70				50				30				10			0	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	42	42	42	35
1	94	90	86	82	85	81	78	75	65	63	60	50	49	47	36	35	35	36	35	35	28
2	85	78	72	66	77	70	65	61	56	53	49	43	41	39	32	30	29	32	30	29	23
3	77	68	61	55	69	61	55	50	49	45	41	38	35	32	28	26	24	28	26	24	19
4	71	60	52	46	63	54	47	42	43	38	34	34	30	27	24	22	20	24	22	20	16
5	64	53	45	39	58	48	41	36	39	33	29	30	26	23	22	19	17	22	19	17	14
6	59	47	39	33	53	43	36	30	34	29	25	27	23	20	19	17	15	19	17	15	12
7	54	42	34	29	49	38	31	26	31	26	22	24	20	17	18	15	13	18	15	13	10
8	50	38	30	25	45	35	28	23	28	23	19	22	18	15	16	13	11	16	13	11	9
9	47	35	27	22	42	31	25	20	26	20	17	20	16	14	15	12	10	15	12	10	8
10	43	31	24	20	39	29	22	18	23	18	15	18	15	12	13	11	9	13	11	9	7

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3349	3349	3349
5°	3273	3872	4501
10°	2970	5645	7462
15°	2525	7376	9011
20°	2056	8551	9183
25°	1716	8950	8997
30°	1448	9008	8980
35°	1281	8862	9212
40°	1117	8669	9452
45°	1012	8529	9489
50°	929	8404	9332
55°	891	8220	8918
60°	913	7862	8265
65°	951	7317	7368
70°	1016	6386	6224
75°	1130	5212	4857
80°	1243	3619	3273
85°	1128	1923	1676

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 9489 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	140.0	0.6
10°-20°	620.7	2.6
20°-30°	1085.7	4.5
30°-40°	1397.6	5.8
40°-50°	1561.1	6.4
50°-60°	1495.1	6.2
60°-70°	1184.9	4.9
70°-80°	696.8	2.9
80°-90°	202.9	0.8
90°-100°	1193.6	4.9
100°-110°	3138.1	12.9
110°-120°	3253.8	13.4
120°-130°	2610.0	10.8
130°-140°	2047.9	8.4
140°-150°	1571.8	6.5
150°-160°	1132.0	4.7
160°-170°	692.6	2.9
170°-180°	234.0	1.0
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0°-30°	1846.4	7.6
0°-40°	3244.0	13.4
0°-60°	6300.2	26.0
0°-90°	8384.8	34.6
90°-120°	7585.5	31.3
90°-150°	13815.2	56.9
90°-180°	15874.0	65.4
0°-180°	24258.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1083	1083	1083	1083	1083	
5°	1055	1131	1274	1441	1494	97
15°	790	1459	2458	2980	3074	220
25°	505	1654	2928	3056	3060	233
35°	341	1580	2757	2914	3029	213
45°	233	1260	2437	2792	2917	180
55°	167	801	2068	2402	2468	152
65°	132	425	1535	1727	1751	131
75°	98	261	842	926	930	102
85°	35	80	209	230	233	37
90°	16	46	125	62	62	16
95°	158	618	2056	1060	721	175
105°	565	856	3469	5267	4914	599
115°	1004	1219	2779	5543	6327	992
125°	1397	1566	2528	4271	5039	1240
135°	1665	1832	2449	3448	3910	1288
145°	1931	2054	2417	2942	3172	1210
155°	2182	2243	2417	2654	2731	1003
165°	2355	2386	2417	2513	2544	665
175°	2449	2449	2434	2465	2465	232
180°	2449	2449	2449	2449	2449	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1082.7	1082.7	1082.7	1082.7	1082.7	1082.7	1082.7	1082.7	1082.7	1082.7	1082.7
2.5°	1082.7	1082.7	1089.6	1093.1	1100.1	1103.6	1110.5	1117.5	1138.4	1141.9	1148.8
5°	1054.8	1068.7	1114.0	1131.4	1180.2	1246.3	1274.2	1319.4	1413.4	1441.2	1458.6
7.5°	1013.0	1044.4	1155.8	1183.6	1305.4	1479.5	1552.7	1650.1	1799.8	1872.9	1932.1
10°	946.9	1013.0	1211.4	1277.6	1476.1	1740.6	1876.4	2012.2	2238.4	2339.4	2377.6
12.5°	873.8	981.7	1270.6	1361.2	1646.6	2033.0	2196.6	2346.4	2604.0	2739.8	2760.6
15°	790.2	936.4	1326.3	1458.6	1827.7	2276.7	2457.7	2642.3	2882.5	2979.9	3004.3
17.5°	717.1	901.7	1378.6	1517.8	1966.9	2496.0	2680.6	2833.8	3028.6	3094.8	3112.3
20°	626.6	846.0	1413.4	1594.4	2113.1	2656.2	2833.8	2952.1	3084.3	3126.1	3133.1
22.5°	560.4	786.8	1434.3	1622.2	2210.6	2753.6	2903.3	2997.4	3087.8	3101.8	3105.2
25°	504.8	720.6	1430.8	1653.6	2294.1	2812.8	2927.7	2997.4	3049.5	3056.5	3056.5
27.5°	452.6	647.5	1416.9	1660.5	2356.8	2826.7	2917.3	2966.0	2990.4	3004.3	3004.3
30°	407.3	577.9	1382.0	1646.6	2384.7	2812.8	2885.9	2910.3	2934.7	2955.6	2966.0
32.5°	372.5	511.7	1329.8	1618.8	2388.1	2778.1	2830.2	2844.2	2879.0	2927.7	2945.1
35°	341.1	445.6	1270.6	1580.5	2367.2	2722.3	2757.2	2771.0	2840.7	2913.8	2938.2
37.5°	309.9	396.9	1194.1	1514.4	2335.9	2656.2	2680.6	2704.9	2812.8	2899.9	2927.7
40°	278.5	355.1	1103.6	1441.2	2287.2	2576.1	2597.0	2635.3	2778.1	2879.0	2906.8
42.5°	254.1	320.3	1006.1	1364.6	2224.5	2485.6	2516.9	2572.6	2736.3	2844.2	2875.5
45°	233.3	285.4	901.7	1260.2	2144.5	2391.6	2436.8	2513.4	2687.5	2791.9	2819.8
47.5°	212.4	261.1	793.7	1152.3	2057.4	2297.6	2356.8	2443.8	2621.4	2722.3	2746.7
50°	195.0	236.7	685.8	1037.4	1963.4	2196.6	2266.3	2356.8	2537.9	2631.8	2663.2
52.5°	181.0	215.8	584.9	922.6	1855.5	2092.2	2172.3	2266.3	2436.8	2527.4	2548.3
55°	167.1	198.4	497.8	800.7	1744.1	1980.8	2067.9	2158.3	2325.5	2402.1	2415.9
57.5°	160.1	184.5	424.7	685.8	1625.7	1855.5	1953.0	2036.5	2193.2	2252.3	2266.3
60°	149.7	174.1	369.0	588.3	1496.9	1737.1	1820.7	1904.2	2036.5	2085.3	2095.7
62.5°	139.2	167.1	327.3	494.3	1364.6	1597.9	1681.4	1758.0	1869.5	1904.2	1918.1
65°	132.3	160.1	295.9	424.7	1228.9	1451.7	1535.2	1601.4	1691.9	1726.7	1733.7
67.5°	125.3	153.2	271.6	365.5	1093.1	1305.4	1368.1	1430.8	1500.4	1535.2	1538.7
70°	114.9	146.2	250.7	323.7	953.8	1138.4	1190.6	1256.8	1312.4	1329.8	1340.3
72.5°	107.9	135.8	236.7	292.4	811.1	978.3	1027.0	1065.3	1114.0	1131.4	1131.4
75°	97.5	121.8	222.8	261.1	664.9	800.7	842.5	880.8	919.1	926.0	915.5
77.5°	87.0	107.9	191.5	219.3	518.7	633.6	668.4	689.3	720.6	727.6	731.1
80°	73.1	94.0	149.7	170.6	376.0	466.5	490.9	508.3	536.1	536.1	543.1
82.5°	55.7	73.1	107.9	121.8	254.1	320.3	341.1	351.6	369.0	369.0	369.0
85°	34.8	45.2	69.6	80.1	153.2	195.0	208.9	212.4	226.3	229.8	229.8
87.5°	17.4	24.3	45.2	48.7	80.1	100.9	100.9	107.9	107.9	104.4	100.9
90°	16.4	29.6	42.8	46.0	72.3	107.3	124.9	111.0	83.3	62.4	62.4
92.5°	65.7	177.4	289.2	317.2	445.9	617.5	703.3	616.4	442.6	312.2	299.9
95°	157.7	362.2	566.8	617.9	1097.3	1736.4	2055.9	1834.6	1392.0	1060.0	1022.4
97.5°	272.8	453.2	633.6	678.8	1478.0	2543.6	3076.4	2936.6	2656.9	2447.0	2375.5
100°	361.5	525.1	688.8	729.7	1616.6	2799.1	3390.3	3400.5	3421.0	3436.4	3351.1
102.5°	437.1	589.8	742.4	780.6	1680.1	2879.4	3479.1	3657.3	4013.7	4281.1	4208.0
105°	565.4	694.6	823.9	856.3	1727.3	2888.6	3469.2	3868.7	4667.8	5267.1	5227.8
107.5°	696.8	817.3	937.8	968.0	1736.0	2760.0	3272.0	3829.3	4943.9	5779.8	5789.3
110°	785.6	894.4	1003.2	1030.4	1722.9	2646.1	3107.7	3730.8	4976.8	5911.3	5952.2



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	872.7	976.4	1080.1	1106.0	1723.4	2546.5	2958.1	3595.8	4871.1	5827.5	5890.3
115°	1004.2	1099.8	1195.5	1219.4	1739.3	2432.5	2779.0	3393.3	4621.8	5543.2	5630.3
117.5°	1134.0	1220.8	1307.8	1329.5	1771.5	2361.0	2655.7	3210.1	4318.9	5150.4	5247.1
120°	1209.5	1291.4	1373.1	1393.6	1797.9	2336.9	2606.4	3113.0	4126.0	4885.8	4979.7
122.5°	1283.5	1366.0	1448.6	1469.2	1835.7	2324.3	2568.7	3024.8	3937.1	4621.3	4713.8
125°	1396.9	1472.1	1547.4	1566.2	1886.7	2314.0	2527.6	2915.1	3690.0	4271.2	4356.5
127.5°	1488.9	1564.9	1640.8	1659.8	1937.5	2307.9	2493.1	2825.8	3491.2	3990.2	4062.1
130°	1538.3	1620.0	1701.8	1722.3	1974.8	2311.5	2479.9	2776.0	3368.5	3812.7	3879.2
132.5°	1589.2	1671.0	1752.7	1773.2	2004.9	2313.9	2468.4	2733.5	3263.9	3661.5	3721.1
135°	1664.7	1739.2	1813.8	1832.4	2037.8	2311.8	2448.7	2670.7	3114.8	3447.9	3499.2
137.5°	1742.0	1815.8	1889.6	1908.0	2087.1	2325.9	2445.4	2633.1	3008.5	3290.1	3332.1
140°	1806.1	1874.0	1942.0	1959.0	2117.2	2328.3	2433.9	2596.0	2920.4	3163.6	3202.8
142.5°	1855.4	1918.2	1981.0	1996.7	2142.4	2336.7	2433.9	2576.3	2861.2	3074.8	3108.7
145°	1931.0	1985.8	2040.6	2054.3	2175.3	2336.7	2417.4	2533.9	2766.9	2941.7	2967.3
147.5°	2006.6	2059.9	2113.2	2126.5	2223.5	2352.8	2417.4	2509.1	2692.4	2830.0	2851.1
150°	2055.9	2104.1	2152.4	2164.4	2248.7	2361.2	2417.4	2494.9	2649.7	2765.9	2783.0
152.5°	2106.9	2143.4	2179.9	2189.0	2265.1	2366.7	2417.4	2483.6	2615.8	2714.9	2727.9
155°	2182.5	2209.5	2236.5	2243.3	2301.3	2378.7	2417.4	2470.0	2575.3	2654.1	2662.7
157.5°	2238.4	2264.6	2290.9	2297.5	2337.4	2390.7	2417.4	2458.4	2540.1	2601.5	2607.6
160°	2276.1	2296.6	2317.0	2322.1	2353.9	2396.3	2417.4	2452.5	2522.6	2575.2	2578.7
162.5°	2313.9	2329.3	2344.5	2348.4	2371.4	2402.1	2417.4	2447.0	2506.2	2550.6	2553.8
165°	2355.0	2368.9	2382.7	2386.3	2396.6	2410.5	2417.4	2438.6	2480.9	2512.7	2516.2
167.5°	2392.8	2399.4	2405.9	2407.6	2416.4	2428.1	2433.9	2447.7	2475.5	2496.3	2497.8
170°	2417.4	2424.0	2430.6	2432.3	2432.8	2433.5	2433.9	2447.7	2475.5	2496.3	2496.3
172.5°	2430.6	2432.0	2433.5	2433.9	2433.9	2433.9	2433.9	2444.8	2466.8	2483.2	2481.9
175°	2448.7	2448.7	2448.7	2448.7	2443.8	2437.2	2433.9	2440.8	2454.7	2465.1	2465.1
177.5°	2448.7	2448.7	2448.7	2448.7	2444.8	2439.7	2437.2	2442.6	2453.6	2461.8	2460.3
180°	2448.7	2448.7	2448.7	2448.7	2448.7	2448.7	2448.7	2448.7	2448.7	2448.7	2448.7



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	1082.7	1082.7
2.5°	1155.8	1148.8
5°	1486.5	1493.5
7.5°	2001.7	1998.2
10°	2489.1	2520.4
12.5°	2844.2	2851.1
15°	3060.0	3074.0
17.5°	3143.5	3147.0
20°	3147.0	3140.1
22.5°	3108.7	3101.8
25°	3063.5	3060.0
27.5°	3021.7	3025.2
30°	3004.3	3014.8
32.5°	3004.3	3021.7
35°	3011.3	3028.6
37.5°	3007.7	3028.6
40°	2993.9	3018.2
42.5°	2955.6	2973.0
45°	2896.4	2917.3
47.5°	2819.8	2833.8
50°	2722.3	2736.3
52.5°	2600.5	2604.0
55°	2454.2	2468.2
57.5°	2297.6	2301.1
60°	2123.6	2134.0
62.5°	1939.0	1939.0
65°	1744.1	1751.1
67.5°	1542.2	1559.6
70°	1336.8	1340.3
72.5°	1134.9	1134.9
75°	926.0	929.5
77.5°	727.6	727.6
80°	539.6	543.1
82.5°	372.5	379.4
85°	233.3	233.3
87.5°	107.9	97.5
90°	62.4	62.4
92.5°	250.1	200.5
95°	871.9	721.4
97.5°	2089.1	1802.8
100°	3010.0	2668.9
102.5°	3915.9	3623.7
105°	5070.9	4913.8
107.5°	5827.4	5865.3
110°	6115.9	6279.5





TEST NUMBER: P938453

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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	6141.6	6392.9
115°	5978.7	6327.1
117.5°	5633.4	6019.8
120°	5355.1	5730.6
122.5°	5084.2	5454.5
125°	4697.6	5038.7
127.5°	4350.0	4637.7
130°	4145.1	4410.9
132.5°	3959.1	4197.2
135°	3704.4	3909.7
137.5°	3500.1	3668.0
140°	3359.9	3516.9
142.5°	3243.7	3378.8
145°	3069.6	3171.8
147.5°	2935.9	3020.6
150°	2851.7	2920.4
152.5°	2779.7	2831.6
155°	2697.0	2731.3
157.5°	2631.7	2655.7
160°	2592.6	2606.4
162.5°	2567.0	2580.2
165°	2530.1	2544.0
167.5°	2503.6	2509.5
170°	2496.3	2496.3
172.5°	2476.8	2471.7
175°	2465.1	2465.1
177.5°	2454.5	2448.7
180°	2448.7	2448.7



TEST NUMBER: P938453  
 CATALOG NUMBER: SQ4-FB-150U-100D-93050-1D-UNV-STD-W-12-3000K

**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	3.60	4.36	4.67	5.44	6.91	16.79	17.56	17.87	18.63	20.11
	3H	4.30	4.98	5.38	6.07	7.56	18.63	19.31	19.71	20.40	21.89
	4H	4.59	5.24	5.68	6.33	7.83	19.27	19.92	20.37	21.01	22.51
	6H	4.84	5.44	5.94	6.53	8.04	19.70	20.30	20.81	21.39	22.90
	8H	4.90	5.47	6.01	6.58	8.08	19.82	20.39	20.93	21.50	23.00
	12H	4.92	5.46	6.03	6.56	8.09	19.89	20.43	21.00	21.53	23.06
4H	2H	10.81	11.46	11.91	12.55	14.05	17.05	17.70	18.15	18.79	20.29
	3H	12.37	12.91	13.48	14.03	15.54	19.10	19.64	20.20	20.75	22.26
	4H	12.46	12.96	13.57	14.06	15.59	19.86	20.36	20.97	21.47	23.00
	6H	12.46	12.89	13.58	14.02	15.54	20.40	20.83	21.52	21.96	23.48
	8H	12.44	12.84	13.56	13.96	15.50	20.56	20.96	21.68	22.08	23.62
	12H	12.39	12.75	13.53	13.89	15.43	20.65	21.02	21.79	22.15	23.69
8H	4H	13.90	14.30	15.02	15.42	16.96	19.91	20.31	21.03	21.43	22.97
	6H	14.14	14.47	15.28	15.63	17.17	20.54	20.87	21.68	22.04	23.57
	8H	14.15	14.44	15.30	15.59	17.14	20.76	21.05	21.91	22.20	23.75
	12H	14.12	14.37	15.27	15.51	17.10	20.91	21.16	22.06	22.30	23.89
12H	4H	14.04	14.40	15.18	15.53	17.08	19.86	20.22	21.00	21.36	22.90
	6H	14.40	14.69	15.54	15.83	17.38	20.52	20.81	21.67	21.96	23.51
	8H	14.46	14.72	15.61	15.85	17.45	20.75	21.01	21.90	22.15	23.74